Instructions for Use

Leica EG1150 C

Cold Plate

Leica EG1150 C V 2.6, English 07/2016
Order No.: 14 0388 80101 RevH

Always keep this manual with the instrument.
Read carefully before working with the instrument.

The information, numerical data, notes and value judgments contained in this manual represent the current state of scientific knowledge and state-of-the-art technology as we understand it following thorough investigation in this field.

We are under no obligation to update the present manual periodically and on an ongoing basis according to the latest technical developments, nor to provide our customers with additional copies, updates etc. of this manual.

To the extent permitted in accordance with the national legal system as applicable in each individual case, we shall not be held liable for erroneous statements, drawings, technical illustrations etc. contained in this manual. In particular, no liability whatsoever is accepted for any financial loss or consequential damage caused by or related to compliance with statements or other information in this manual.

Statements, drawings, illustrations and other information regarding the contents or technical details of the present Instructions for Use are not to be considered warranted characteristics of our products.

These are determined only by the contract provisions agreed between ourselves and our customers.

Leica reserves the right to change technical specifications as well as manufacturing processes without prior notice. Only in this way is it possible to continuously improve the technology and manufacturing techniques used in our products.

For the instrument serial number and year of manufacture, please refer to the nameplate at the back of the instrument.

Leica Biosystems Nussloch GmbH
Heidelberger Str. 17 - 19
D-69226 Nussloch
Germany

Phone: +49 62 24 143-0
Fax: +49 6224 143-268
Internet: http://www.LeicaBiosystems.com

Assembly contracted to Leica Microsystems Ltd. Shanghai

Table of contents

1. Important Information 5
1.1 Symbols in the text and their meanings 5
1.2 Qualification of personnel 6
1.3 Intended use of instrument 6
1.4 Instrument type 6

2. Safety 7
2.1 Safety notes 7
2.2 Warnings 8
2.3 Integrated safety devices 9

3. Instrument components and specifications 10
3.1 Overview – instrument parts 10
3.2 Technical Data 11

4. Instrument Setup 12
4.1 Location conditions 12
4.2 Delivery range 12
4.3 Unpacking and installation 13
4.4 Power supply 15

5. Operation 16
5.1 Switch on the instrument 16
5.2 Replacing the secondary fuse 16
5.3 Instrument malfunctions 17

6. Cleaning and Maintenance 18
6.1 Cleaning the instrument 18
6.2 Maintenance instructions 18

7. Warranty and Service 19
8. Decontamination Certificate (Master) 20

1.1 Symbols in the text and their meanings

Warnings
appear in a gray box and are marked by a warning triangle .

Notes, i.e. important information for the user, appear in a gray box and are marked with the symbol .

(5)
(Fig. 5)

Numbers in parentheses refer to item numbers in illustrations or to the illustrations themselves.

REF Order No.

SN Serial number

Symbol for alternating current

The package contents are fragile and must be handled with care.

Indicates the correct upright position of the package.

The package must be kept in a dry environment.

It is not permitted to stack packages, and no loads may be placed on top of the package.

Manufacturer

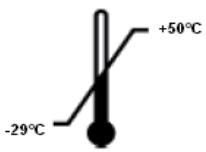
Date of manufacture

Observe the Instructions for Use

The CE labeling shows that the product corresponds to one or more applicable European directives.

Environmental protection symbol of the China RoHS directive. The number in the symbol indicates the "Environment-friendly Use Period" of the product. The symbol is used if a substance restricted in China is used in excess of the maximum permitted limit.

Symbol for labeling electrical and electronic equipment in accordance with Section 7 of the German Electrical and Electronic Equipment Act (ElektroG). ElektroG is the law regarding the sale, return and environmentally sound disposal of electrical and electronic equipment.



Indicates the temperature range permitted for storing and transporting the package.

Minimum -29 °C
Maximum +50 °C

Indicates the humidity range permitted for storing and transporting the package.

minimum 10 % r.H.
maximum 85 % r.H

Tip-n-Tell indicator to monitor whether the shipment has been transported and stored in upright position according to your requirements. With a pitch of 60° or more, the blue quartz sand flows into the arrow-shaped indicator window and sticks there permanently. Improper handling of the shipment is immediately detectable and can be proven definitively.

In the Shockwatch system, a precision glass tube shows shocks or impacts that are above a specified intensity through red coloration. Exceeding a defined acceleration (g value) destroys the surface tension of the liquid in the interior of the tube. This causes the indicator tube to change color.

1.2 Qualification of personnel

- The Leica EG1150 C may be operated by trained laboratory personnel only.
- All laboratory personnel designated to operate this instrument must read these Instructions for Use carefully and must be familiar with all technical features of the instrument before attempting to operate it.

1.3 Intended use of instrument

The Leica EG1150 C is a cold plate for chilling and blocking out histological tissue samples in paraffin blocks.

Any other use of the instrument will be considered as improper use!

1.4 Instrument type

All information provided in these Instructions for Use applies only to the instrument type indicated on the cover page.

A nameplate with the serial number is attached to the back of the instrument.

Fig. 1

Fig. 1 is only an example. Details on your device may differ.

The safety and caution notes in this chapter must be observed at all times.
Be sure to read these notes even if you are already familiar with the operation and use of other Leica products.

2.1 Safety notes

These Instructions for Use include important instructions and information related to the operating safety and maintenance of the instrument.

The Instructions for Use are an important part of the product, and must be read carefully prior to startup and use and must always be kept near the instrument.

This instrument has been built and tested in accordance with the safety requirements for electrical equipment for measurement, control, and laboratory use.

To maintain this condition and ensure safe operation, the user must observe all notes and warnings contained in these Instructions for Use.

These Instructions for Use must be appropriately supplemented as required by the existing regulations on accident prevention and environmental safety in the operator's country.

The protective devices located on the instrument and the accessories must not be removed or modified. Only service personnel qualified by Leica may repair the instrument and access the instrument's internal components.

Use only the provided power cable - this must not be replaced with a different power cable. If the power plug does not fit in your socket, contact our service.

Residual risks
The instrument has been designed and constructed with the latest state-of-the-art technology and according to recognized standards and regulations with regard to safety technology. Operating or handling the instrument incorrectly can place the user or other personnel at risk of injury or can cause damage to the instrument or other property. The instrument may be used only as intended and only if all of its safety features are in proper working condition. Malfunctions that impede safety must be remedied immediately.

For current information about applicable guidelines, please refer to the CE declaration of conformity and on our Internet site at:
http://www.LeicaBiosystems.com

To prevent damage to the instrument or the specimen, only accessories authorized by Leica may be used.

2.2 Warnings

The safety devices installed in this instrument by the manufacturer only constitute the basis for accident prevention. Operating the instrument safely is, above all, the responsibility of the owner, as well as the designated personnel who operate, service or clean the instrument.
To ensure trouble-free operation of the instrument, make sure to comply with the following instructions and warnings.

Warnings – Safety notes on the instrument itself

- **The instrument may be operated by trained laboratory personnel only. It must only be operated for the purpose of its designated use and according to the instructions contained in these Instructions for Use.**
- **Safety notes on the instrument itself marked with a warning triangle indicate that the correct operating instructions (as defined in these Instructions for Use) must be followed when operating or replacing the item marked. Nonobservance can cause accidents, injuries and/or damage to the instrument/accessories.**

Safety instructions – transport, installation and operation

- **After unpacking the instrument it may only be transported in an upright position.**
- **Before connecting the device to a power source, ensure that the voltage indicated on the type plate matches the voltage available at the place of installation.**
- **The unit must be connected only with the supplied power cable and only to a grounded power receptacle. Do not use an extension cord.**
- **The power socket to which the instrument is connected has to be near the instrument and easily accessible.**

- **The minimum voltage (see Technical data) must be maintained while starting the refrigeration unit.**
  The compressor needs a start-up current of approx. 25 A. A stable power supply in accordance with the instrument's specifications is essential to its proper functioning. Please ensure that your electrical installation fulfills these preconditions prior to installing the unit. Nonobservance causes damage to the instrument.
- **Switch off the instrument each time before servicing, repairing or cleaning, and pull out the power plug.**

2.3 Integrated safety devices

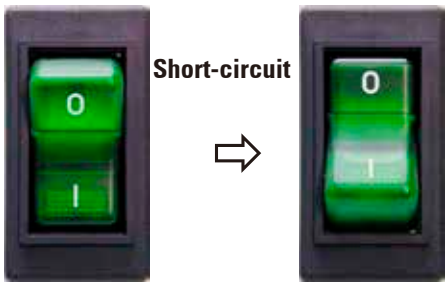


Fig. 2

Automatic circuit breaker in the main switch

- An automatic circuit breaker with a lit switch is located in the main switch. This circuit breaker disconnects the unit from the power supply in the event of a short circuit.
- In this case, the main switch jumps to the position "**0**" = **Off**.

3.1 Overview – instrument parts

- The instrument is distinguished by a simple, modular design and a powerful refrigeration unit with precisely controlled cooling performance.
- High temperature consistency ensures homogeneous blocking out and prevents tearing of the paraffin blocks.
- High cooling performance ensures that the instrument's working temperature is reached quickly.
- Optimized temperature distribution in the cold plate prevents dripping condensation.
- The generously-dimensioned cooling surface has room for around 70 blocks.
- Designed for use with the Leica EG1150 H paraffin embedding station.

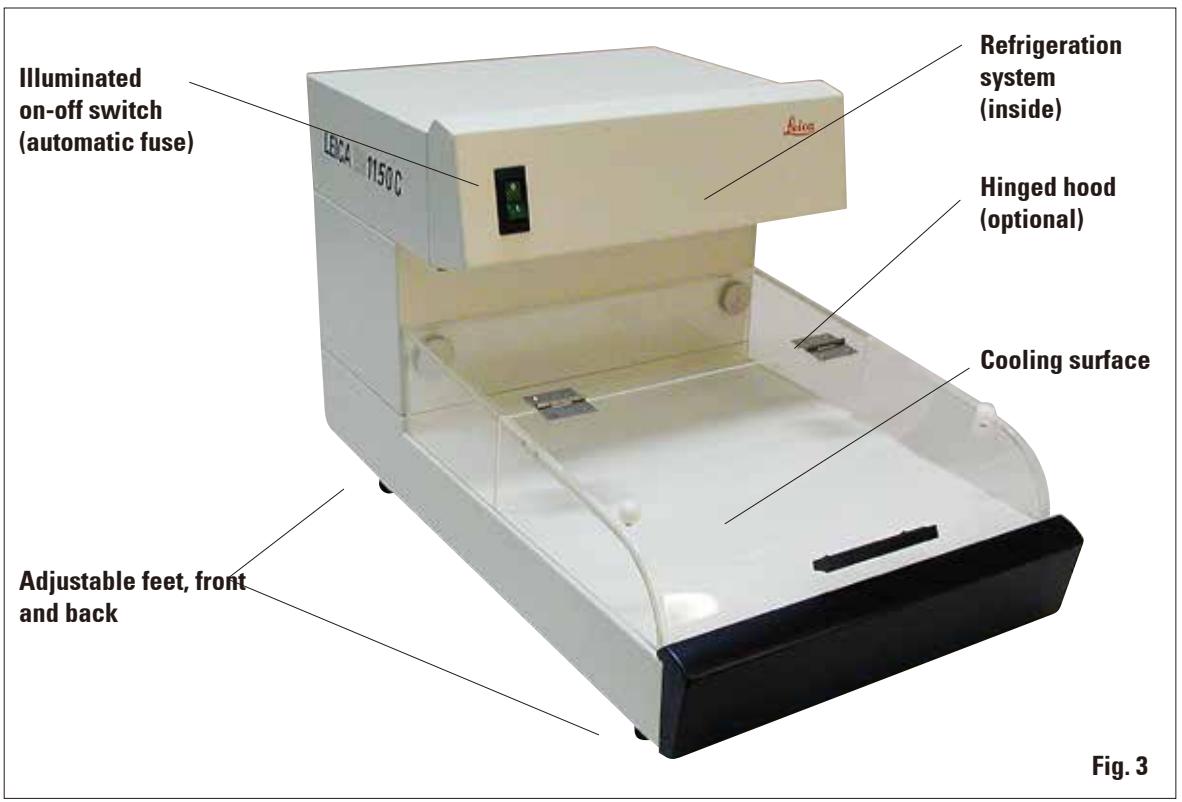


Fig. 3

3.2 Technical Data

General data

Approvals: The instrument-specific marks are located on the rear panel of the instrument next to the nameplate.
The 120 V version has the test symbol c-CSA-us.

Voltage of power supply:
The device requires a specific AC voltage, see table at right.
Instrument type acc. to identification label.
AC ±10 %

Instrument type	Power supply voltage	Order number	Coolant
EG1150 C	230 V / 50 Hz	14 0388 38037	80 g ± 5 g
	120 V / 60 Hz	14 0388 38038	80 g ± 5 g
	240 V / 50 Hz	14 9011 50C01	80 g ± 5 g
	100 V / 50 -60 Hz	14 0388 38039	80 g ± 5 g

Power fuse: T1A L250 V
Nominal power: 230 V and 240 V instruments: 350 VA,
120 V instruments: 400 VA, 100 V instruments: 300 VA
Maximum start-up current (5 s) 25 A
Operating temperature range: +15 °C to +28 °C
Operating temperatures: -5 °C up to a room temperature of approx. +28 °C
Relative humidity: 20 to 80 % - non-condensing
Permissible temperature range during storage and transport: -29 °C to +50 °C
Permissible humidity range during storage and transport: 10 to 85 % - non-condensing
IEC 1010 classification: Protection class 1
Pollution degree 2
Operating elevation: up to max. 2000 m NN
IP protection class (IEC 60529): IP20

Refrigeration unit

Refrigeration capacity*: 110 W
Safety factor: 3
Refrigerant: R 134a
Compressor oil: 180 cm^3 Emkarate RL 15 s, ICI

*according to CECOMAF, fluid temperature: 55 °C, evaporation temperature: -25 °C

Dimensions and weights

Width: 360 mm
Depth: 650 mm
Height: 360 mm
Weight: 23 kg

4.1 Location conditions

- Stable, vibration-free laboratory table with horizontal, flat table top, as far as possible vibration-free ground.
- No direct sunlight or strong temperature fluctuations. Room temperature consistently between +15 °C and +28 °C.

At a room temperature of > +28 °C, the working temperature of the cold plate of -5 °C may not be reached at all points.

- Relative air humidity maximum 80 %, non-condensing.
- The instrument should be set up in such a way that the air circulation is not impaired.

To ensure proper function, there must be gap of at least 15 cm behind the instrument. Failure to observe this distance may result in serious damage to the refrigeration unit of the device. The instrument should not be operated in hazardous locations.

4.2 Delivery range

The basic equipment for the Leica EG1150 C cold plate contains the following components:

	Order No.
• 1 basic unit Leica EG1150 C	
only for Australia:	
• 1 series transformer, 230/240 V	14 0469 31998
• 1 replacement fuse T 1.0 A, 6.3 x 32 mm	14 6000 01483
• 1 Instructions for Use German/English (including CD and ordering information)	14 0388 80001
• Optional: Unit cover (acrylic)	

The country specific power cord needs to be ordered separately.

Please find a list of all power cords available for your device on our website www.LeicaBiosystems.com within the product section.

Please compare the delivered components against the packing list and your order.
Should there be any discrepancy, please contact the Leica distributor handling your order.

4.3 Unpacking and installation

The unpacking instructions are located on the outside of the transport box in which the instrument is delivered shows the assembly of the original packaging.
The numbers indicate the sequence of disassembling and reassembling.

When the instrument is delivered, check the tilt indicators on the packaging.
If the arrowhead is blue, the shipment was transported laying flat, was tilted at too great an angle or fell over during transport. Note this on the shipping documents and check the shipment for possible damage.

Fig. 4

These unpacking instructions only apply if the box is placed with the symbols facing upwards for unpacking.

1. Remove and lift off 8x screws (**1**) for the lid (**2**).

The Leica EG1150C always has to be transported upright and horizontally. It must not be inverted under any circumstances, even for short periods, or stored on one of its sides.

It is mandatory to observe a waiting time of 4 hours between the last transport and the first time the instrument is switched on. The compressor oil moved during transport must be able to flow completely back into its original position.

2. Remove upper pad (**3**).
3. Remove the accessories (**4**).

Fig. 5

4. Lift the EG1150 C instrument (**5**) from the bottom pad (**6**). Also grab the instrument with one hand down and at the front (**7**) and with the other hand up and at the back (**8**) and lift it straight from the transport crate.

The packaging must be retained for the duration of the warranty period.
To return the instrument, follow the instructions above in reverse order.

4.4 Power supply

The Leica EG1150 C refrigeration unit requires a specific voltage and frequency (refer to the "Technical Data" chapter), and is therefore always delivered with a power cable that fits the instrument.

Observe these instructions to prevent damage to the instrument:

Before connecting the instrument to the power supply, it is mandatory to check whether the voltage specified on the identification label (rear side) matches the actual voltage values at the installation location.
If this is not the case, the connection must not be made!
The unit must be connected only with the supplied power cable and only to a grounded power receptacle.
Do not use an extension cord!

- Connect the power cord plug (**7**) to the connecting port (**6**).
- Plug the power cord into the wall outlet.

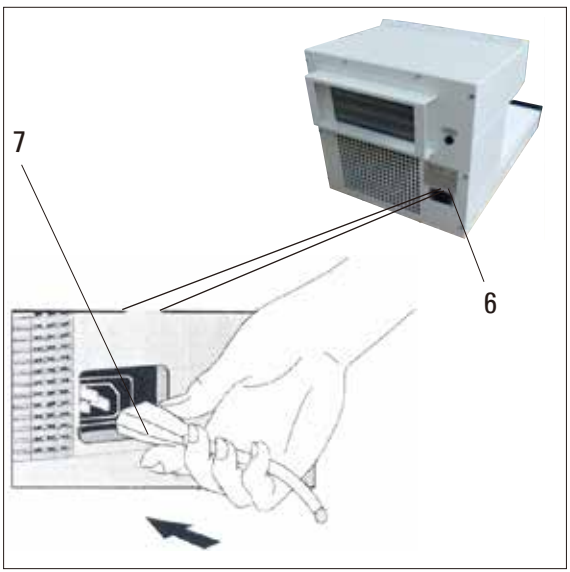


Fig. 6

5.1 Switch on the instrument

After installation as described in Chapter 4, the Leica EG1150 C is ready for operation. Switch on the device with the On-Off switch at the front left of the instrument ("**I**" = **ON**). A lamp lights up in the switch to indicate that the unit is operational and the refrigeration unit will start working.
Depending on the room temperature, the working temperature of the cooling surface (-5 °C) will be reached in around 25 minutes (see also Ch. 4.1).

The cooling surface may not be loaded with molds until the cooling time has elapsed. Otherwise, the working temperature of -5 °C may not be reached.

5.2 Replacing the secondary fuse

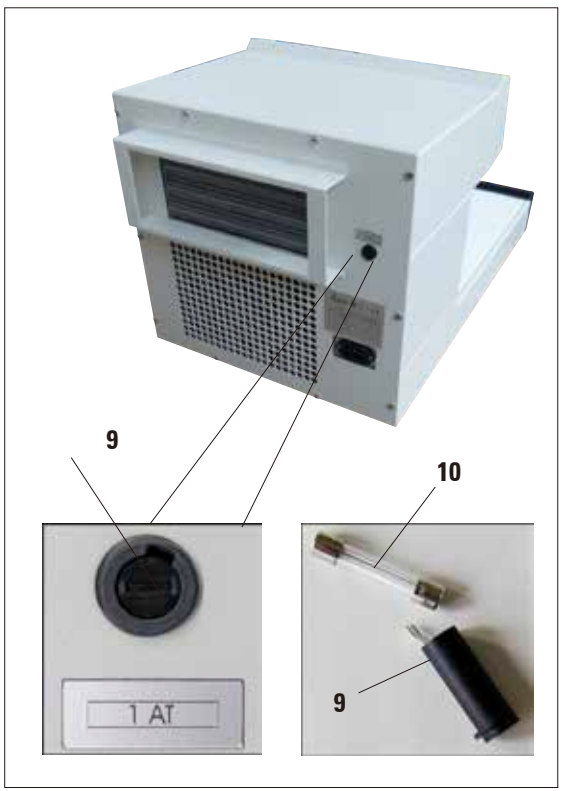


Fig. 7

A miniature fuse to protect the electronic components is located on the rear of the instrument.

Before replacing the fuse, always switch the instrument off and pull the power plug from the wall socket.
Only miniature fuses of the type specified in the chapter "Technical data" may be used.

To replace the fuse, please proceed as follows:

- Using a screwdriver, lightly press the fuse holder (**9**) and turn counterclockwise about $^1/_4$ turn.
- Remove the fuse holder and take out the fuse (**10**).
- Replace it with a new fuse of the same type.
- Replace the fuse holder (**9**).
- Using a screwdriver, gently press the fuse holder and turn it clockwise about $^1/_4$ turn.
- Reconnect the instrument to an AC power outlet and switch it on.

5.3 Instrument malfunctions

If you cannot solve your problem using the help in the following table, please contact your Leica customer service organization or the Leica dealer from whom you purchased the instrument.

Malfunction	Possible causes	Corrective action
Instrument doesn't work.	Power switch not turned on. or The cut-out function of the power switch activated.	Check instrument is connected, then turn main power switch on. Only for Great Britain: Check the fuse in the power plug.
Cooling unsatisfactory, formation of condensation.	Room temperature too high or exposure to direct sunlight.	Check the cooling again at a lower room temperature.
	Inadequate air supply to ventilation unit.	Check distance of instrument to wall; it must be at least 15 cm.
	Refrigeration system leak.	**The instrument must be serviced or repaired by a service technician.** **Please contact customer service.**
Compressor switches off after a brief period of operation and switches back on shortly thereafter.	AC power does not match specifications or Compressor defective.	Check the voltage of power supply.
Compressor does not start.	Compressor defective.	**The instrument must be serviced or repaired by a service technician.** **Please contact customer service.**
Compressor switches off after a short period of operation.	Compressor defective.	

6. Cleaning and Maintenance

6.1 Cleaning the instrument

Switch off the instrument each time before cleaning and pull out the power plug.
While handling cleaning materials, observe the safety regulations of the manufacturer and the lab regulations valid in the country of use.
During cleaning, do not allow any liquid to penetrate inside the instrument!
To prevent scratching the surface of the instrument, do not use metallic tools with sharp edges under any circumstances.

Work surface

- All common laboratory cleaning products suitable for the removal of paraffin (e.g. Paraguard or xylene substitutes) can be used to clean the work area.

Instrument and outer surfaces

- If necessary, clean the painted exterior surfaces with a mild household cleaner or soapy water and wipe with a damp cloth.
- Avoid prolonged contact of organic solvents on the surface of the instrument. Xylene or acetone will damage the finished surfaces!

6.2 Maintenance instructions

Only Leica service technicians are authorized to open the instrument for maintenance and repair work.

Please observe the following points to ensure the instrument's reliable function over extended periods:

- Clean the instrument with care daily.
- Regularly remove dust from the ventilation slots on the back of the instrument with a brush or vacuum cleaner.
- Have the instrument inspected at least once a year by an authorized Leica customer service technician.
- Enter into a service contract at the end of the warranty period. For more information, contact the relevant Leica customer service organization.

Warranty

Leica Biosystems Nussloch GmbH guarantees that the contractual product delivered has been subjected to a comprehensive quality control procedure based on the Leica in-house testing standards, and that the product is faultless and complies with all technical specifications and/or characteristics warranted.

The scope of the warranty is based on the content of the concluded agreement. The warranty terms of your Leica sales organization or the organization from which you have purchased the contractual product shall apply exclusively.

Service information

If you are in need of technical customer support or spare parts, please contact your Leica representative or the Leica dealer where you purchased the instrument.

Please provide the following information:

- Model name and serial number of the instrument.
- Location of the instrument and name of the person to contact.
- Reason for the service call.
- Date of delivery.

Decommissioning and disposal

The instrument or parts of the instrument must be disposed of in compliance with the local laws.

8. Decontamination Certificate (Master)

Dear Customer,

Any product that is to be returned to Leica Biosystems or serviced on site, must be cleaned and decontaminated in the appropriate manner. Since it is not possible to decontaminate for prion diseases, such as CJD, BSE, CWD etc., equipment exposed to specimens containing prion diseases cannot be returned to Leica Biosystems for repair. On-site repair of prion contaminated equipment will only be conducted after the Field Service Engineer has been educated in the risks, instructed in the policies and procedures of the institution, and provided with personal protective equipment. Please fill out this confirmation carefully and enclose a copy with the instrument. Attach the confirmation to the outside of the flight case or hand it directly to the service technician.

Packages will not be opened, nor servicing commenced until the Company or service engineer have received a satisfactory certificate. Should returned goods be considered a hazard by the Company, they will be returned immediately to the customer at his/her expense. **Note:** Microtome knives must be in boxes.
Mandatory information: Fields marked with * are mandatory. Depending on whether the instrument is contaminated, please also complete either section A or section B.

Nameplate information

Model (see nameplate)*

SN (see nameplate)*

REF (see nameplate)*

Tick Box A if applicable. Otherwise please complete all parts of B, providing further information as requested or appropriate.

A

Yes ☐ This equipment has not been in contact with unfixed biological samples.

B

1 This equipment has been exposed internally or externally to hazardous materials as indicated below:

Yes	No		Please provide further detail here:
☐	☐	Blood, body fluids, pathological samples	
☐	☐	Other biohazards	
☐	☐	Chemicals/substances hazardous to health	
☐	☐	Other hazards	
☐	☐	Radioactivity	

2 This equipment has been cleaned and decontaminated:

Yes	No		Please provide further detail here:
☐	☐	If yes, give details of the method:	
		If no**, please indicate why not:	

** Such equipment must not be returned without the written agreement of Leica Biosystems.

3 The equipment has been prepared to ensure safe handling/transportation. Whenever possible, please use the original transportation case/box.

Yes ☐ No ☐

8. Decontamination Certificate (Master)

Important - to avoid refusal of shipment:
Place one copy in the unit prior to packaging, or hand it over to the service engineer. Customer assumes all responsibility for the immediate return shipment of articles sent to Leica without proper decontamination documentation.
If you have any further questions, please call your local Leica organization.
Leica Internal Use: If applicable, note corresponding Job and RAN-/RGA-Number:

Job Sheet No.: _____ BU **R**eturn **A**uthorization **N**umber: _____ SU **R**eturn **G**oods **A**uthorization: _____

Signature/Date*

Name*

Position*

eMail

Institute*

Department*

Address*

Phone* **Fax**

Leica Biosystems Nussloch GmbH
Heidelberger Str. 17-19
69226 Nussloch, Germany

Phone: ++49 (0) 6224 143 0
Fax: ++49 (0) 6224 143 268
www.LeicaBiosystems.com

www.LeicaBiosystems.com

Leica Biosystems Nussloch GmbH
Heidelberger Str. 17 - 19
D-69226 Nussloch
Germany
Phone: +49 6224 143-0
Fax: +49 6224 143-268
Internet: http://www.LeicaBiosystems.com